



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,830	03/04/2004	Hyun-Ki Park	P57015	4899

7590 04/05/2006

Robert E. Bushnell  
Suite 300  
1522 K Street, N.W.  
Washington, DC 20005-1202

EXAMINER

VAN, LUAN V

ART UNIT	PAPER NUMBER
----------	--------------

1753

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Cu

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,830	<b>Applicant(s)</b> PARK ET AL.	
	<b>Examiner</b> Luan V. Van	<b>Art Unit</b> 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment of March 14, 2006 does not render the application allowable.

### ***Status of Objections and Rejections***

The rejection of claim 12 under 35 USC 112 is withdrawn in view of Applicant's amendment.

The rejection of claims 1, 2, 4, 6-13, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Shea is withdrawn in view of Applicant's amendment.

All other rejections from the previous office action are maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4, 6-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shea in view of Kiyama (EP 0963146 A1).

Regarding claim 1, 8 and 11, Shea teaches a method for fabricating electrical conductors applicable for "electromagnetic protection" (column 1 lines 16-18), comprising the steps of preparing a metal plate 10 (figure 1-6) for plating; forming a photoresist layer 14 (figure 1) on an upper surface of the metal plate, the photoresist layer having a pattern 18 (figure 2b); forming a plating layer 20 (figure 3) on a remaining upper surface of the metal plate on which the photoresist layer is not formed; removing the photoresist layer (figure 4) from the metal plate; arranging an adhesive film 22 (figure 5-6) on the metal plate having the plating layer; adhering the adhesive film (column 3 lines 24-30) to an upper surface of the plating layer; and separating the adhesive film (figure 6) from the metal plate so that the plating layer is adhered to a lower surface of the adhesive film. With respect to claim 11, Shea teaches that a dielectric substrate can be used in place of the metal plate (column 3 lines 48-60), and that a conductive layer of nickel alloy (i.e., metal foil) is placed on top of the dielectric substrate. With respect to the preamble, "manufacturing an electromagnetic wave shielding filter" is an intended use of the instant invention and thus is not given patentability weight.

The difference between the reference to Shea and the instant claims is that the insulating layer of Shea does not have a mesh pattern.

Kiyama teaches a method of manufacturing an electromagnetic shield comprising the steps of electroplating copper on a photoresist mask having a mesh pattern (figure 1), and forming an electroplated layer having a mesh pattern (figure 2-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Shea by using a mesh pattern of Kiyama for pattern 18, because using the mesh pattern would reduce electrical resistivity and increase transparency and electromagnetic wave shield properties (paragraph 25.)

Regarding claim 2, 9 and 12, Shea teaches the metal plate comprises stainless steel/chromium- nickel alloy (column 2 lines 50-51).

Regarding claim 4 and 13, Shea teaches the plating layer comprises at least one of copper or silver (column 2 lines 55-56).

Regarding claim 6, 10 and 17, Shea teaches the adhesive film comprises a polymer film (column 3 lines 24-30).

Regarding claim 7 and 16, Shea teach the binding force of the plating layer to the adhesive film is stronger (column 2 lines 15-23) than a binding force of the plating layer to the substrate or the metal foil.

Regarding claim 14, Shea do not explicitly teach blackening the surface of the plating layer.

Kiyama teaches a method of manufacturing an electromagnetic shield comprising the steps of blackening the surface of the plating layer to improve the visibility (paragraph 31).

Art Unit: 1753

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of Shea by blackening the surface of the plating layer as taught by Kiyama, because it would improve the visibility of the display panel.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shea in view of Kiyama (EP 0963146 A1), and further in view of Cohen.

Shea and Kiyama teaches the method as described above in addressing claim(s) 1.

The difference between the references and the instant claims is that the references do not explicitly teach using an oxide insulating layer.

Cohen teaches filling patterned openings by electroplating using "an insulating mask such as an oxide, photoresist, or polyimide layer" in the fabrication of, for example, coils and other metallic structures of thin-film heads, metallic conductors in high density packages, and in MEMS devices (column 1 lines 25-38). Cohen teaches that oxide and photoresist masks are equivalent.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the combined method of Shea and Kiyama by using an oxide insulating layer of Cohen for the resist mask, because an oxide is a suitable and functionally equivalent insulating mask for electroplating.

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shea in view of Kiyama (EP 0963146 A1), and further in view of Uriu et al..

Shea and Kiyama teaches the method as described above in addressing claim(s) 1 and 11.

The difference between the references and the instant claims is that the references do not explicitly teach using an adhesive film comprising of PET.

Uriu et al. teach using an adhesive film comprising of PET for peeling off a conductive pattern (column 8 lines 12-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the combined method of Shea and Kiyama by using PET film of Cohen, because a PET film is suitable dielectric substrate for peeling off an electroplated conductive pattern.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive.

In the arguments presented on page 10 of the amendment, the applicant argues that the instant claims relate to a method of manufacturing an electromagnetic wave shield filter, but Shea relates to a method of manufacturing fine line electrical conductors. In response to applicant's arguments, the recitation "a method of manufacturing an electromagnetic wave shield filter" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not

Art Unit: 1753

accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The applicant further argues on page 11 that the instant claims do not apply heat and pressure. First, since the claims recite "comprising", additional steps may be incorporated. Secondly, the examiner acknowledges that differences exist between the disclosures of the prior art documents and the instant application. However, in order for these to be the basis of patentability, they must be reflected in the language the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

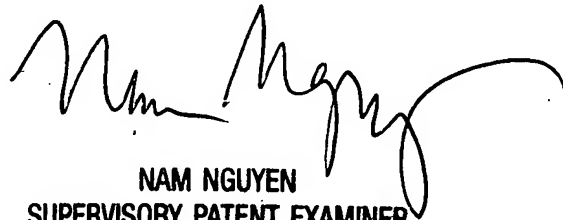
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan V. Van whose telephone number is 571-272-8521. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LVV  
3/30/2006



NAM NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700